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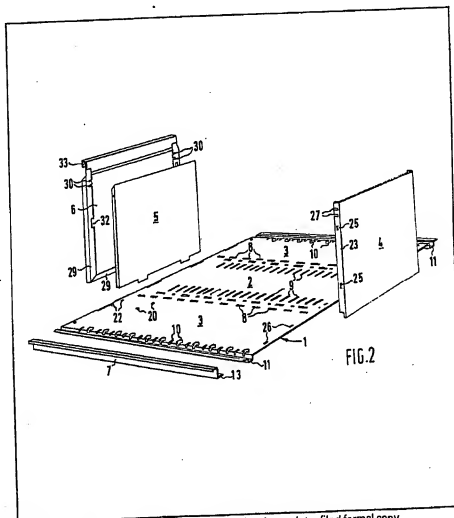
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(54) Parts for assembling drawers and the like

(57) In a kit of parts, to be stored and transported as a flat pack, and constituted to be assemblable manually without tools and as a permanent structure into a filing cabinet drawer, a flat unit 1 is bent along lines 8 of perforations to provide a base 2 and side walls 3; runners 7 are located along the longitudinal corners of the bent unit by tongues and locked in position by integral locking catches on the runners engaging holes in the base; similar locking catches secure a back wall 4; and a front wall 6 is also made secure by integral clip devices, while an inner front wall 5 is located between the wall 6 and tabs on the unit 1.



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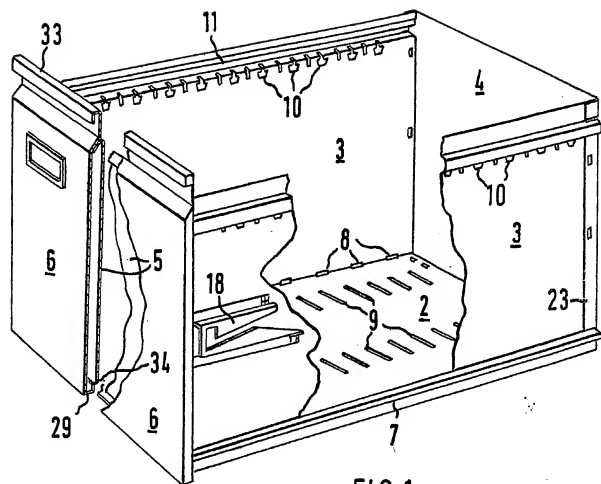


FIG. 1

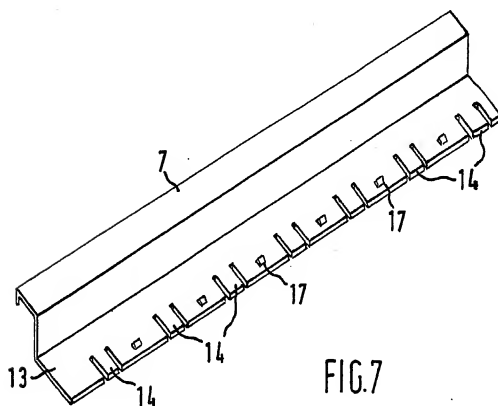
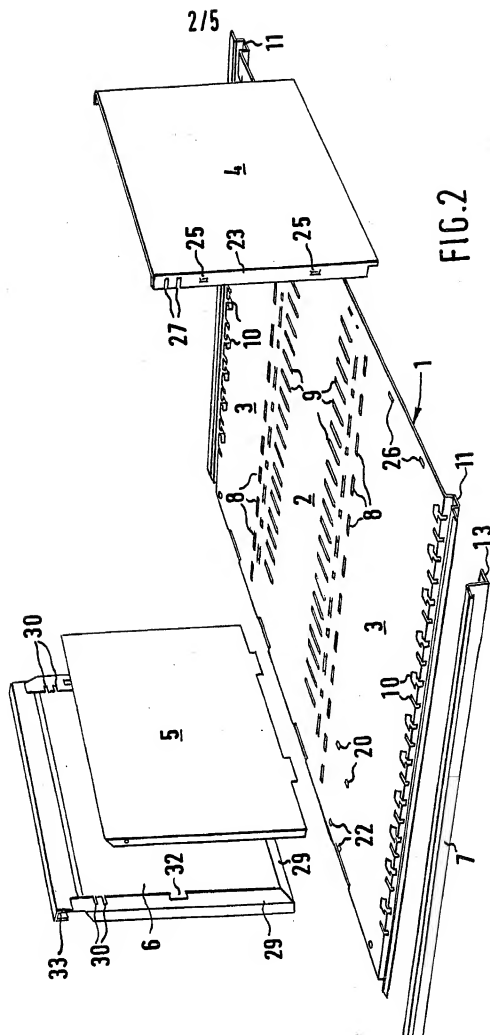
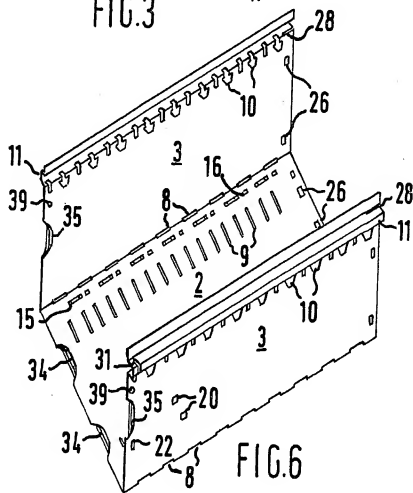
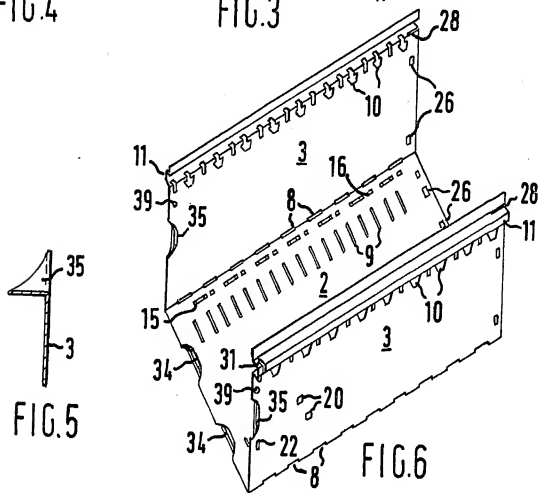
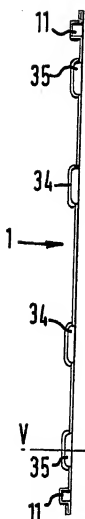
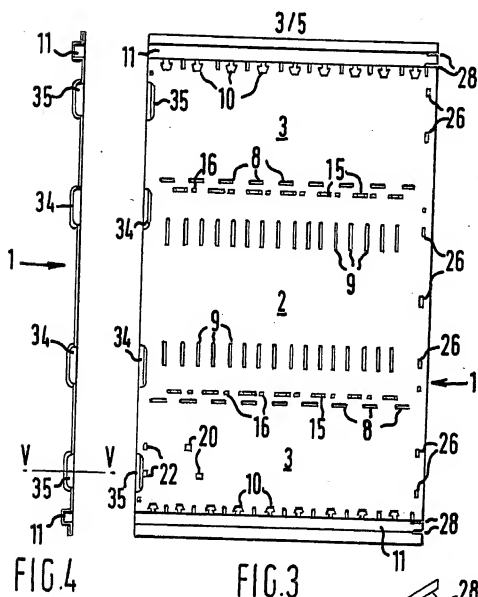


FIG. 7

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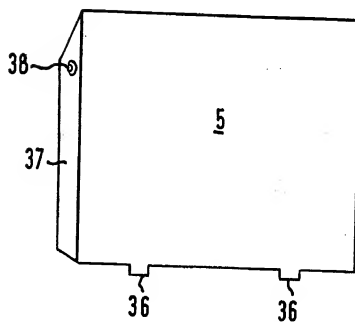


FIG. 11

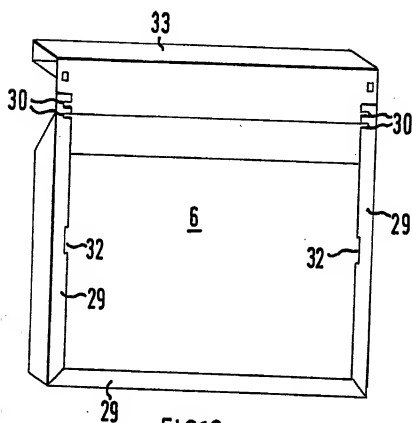


FIG. 12

SPECIFICATION

Packs of units for assembling drawers and the like

5 This invention relates to drawers and particularly to sets of units capable of being stored or transported as flat packs for assembly into drawers. The invention is concerned with drawers made of metal but it is also applicable to the use of plastics materials for drawer construction.

A primary use of the invention is in the construction of drawers for filing cabinets but the invention is also applicable to such items as filing bins or trays and it is to be understood that the term "drawer" as used in this specification is intended to include such items except, of course, where a drawer for drawing out of a cabinet or chest is clearly being referred to.

Flat packs of drawer units are well known but they are costly to make and assemble. The assembly 20 generally involves spot welding which, besides requiring skilled labour, necessitates subsequent finishing of the surfaces.

A main purpose of the present invention is to provide an inexpensive drawer in a flat condition for storage or transportation which is made from pre-finished units that can be assembled by unskilled labour substantially without the use of tools.

According to the invention there is provided a set of units for assembling a drawer manually, substantially without the use of tools and as a permanent structure, comprising a flat base and side wall unit having a base portion and side wall portions divided from the base portion by lines of weakness in the unit enabling the initially flat unit to be bent along the lines of weakness so that the wall portions are located at required angles to the base portion, and further units arranged to be permanently secured to base and side wall unit by latching elements forming parts of the said units for locking them to one another. In the case of metal sheeting the lines of weakness are advantageously formed by perforating the sheeting along those lines. In the case of a sheet of plastics material the lines of weakness may be formed by reducing the thickness of the sheet along the lines. The said latching elements preferably consist of locking catches in one unit engaging holes in the unit to which it is to be fixed. The said further units may consist of front and back wall units and runners for a sliding drawer.

50 In order that the invention may be clearly understood and readily carried into effect, one form of drawer structure will now be described, by way of example, with reference to the accompanying drawings, in which:-

55 *Figure 1* is a perspective view of a drawer for a filing cabinet, some parts being shown broken away to disclose the interior structure;

Figure 2 is a perspective view of units for constructing the drawer of *Figure 1*;

60 *Figures 3 and 4* are a plan and side elevation of a substantially flat unit to be formed into a base and side walls of the drawer of *Figure 1*;

Figure 5 is a cross-section of a detail of *Figure 4* on an enlarged scale;

65 *Figure 6* is a perspective view of the unit of *Figure*

3 when bent to constitute the drawer base and side walls;

Figure 7 is a perspective view of a drawer runner; *Figure 8* is a perspective view of a detail;

70 *Figure 9* is a perspective view of a drawer back wall unit;

Figure 10 is a perspective view of a lock bracket; and

75 *Figures 11 and 12* are perspective views of inside and outside drawer front wall units.

The drawer shown in *Figure 1* is erected and assembled from a set of precast metal sheet units (*Figure 2*) consisting of an initially flat base and side wall unit 1 having a base portion 2 and side wall portions 3, a back wall unit 4, two front wall units 5, 6 and two drawer runners 7. Clearly these units can be assembled in a flat pack for storage and transport.

The first step in forming the drawer is to fold the unit 1 along two lines 8 of elongated perforations so that the side walls 3 project vertically from the base 2 as shown in *Figure 6*.

In this particular example of the invention, the body of the drawer is designed to receive drawer dividers as described in the specification of Patent Application No. 4421777 formed with pairs of lugs that fit into selected slots 9 in the base 2 and lateral lugs that enter selected lateral slots 10 distributed along the side walls 3 beneath channels 11 of U-shaped section along which the lugs can be moved from one pair of lateral slots to another.

The second step in the assembly of the drawer is to invert the body of *Figure 6* and secure the drawer runners 7 along its longitudinal corners. As shown in *Figure 7* each of these drawer runners 7 is a channel shaped member with a lateral flange 13 formed with pairs of slots defining tongues 14. As best shown in *Figure 8*, when a runner 12 is fitted to the drawer body, the tongues 14 are caused to slide with friction beneath bridges 15 pressed out of the base 2. When once fitted, withdrawal of the drawer runner 12 is prevented by locking catches 16. Each locking catch 16 is a resilient tab bent out from the base 2 (*Figure 8*) in such a way as to be forced back to the plane from which it is bent by flange 13 while the runner is being fitted, until the catch can snap into a square hole 17 with its free end retroverted to oppose reverse movement of the tongues and drawer runner by engaging the edge of the hole.

If the drawer is to be fitted with a lock bracket 18 having cam tracks for co-operation with a locking bar as described in the Specification of Patent Application No. 28190/77, the next step is to fit this bracket 18 by first inserting fixing lugs 19 (*Figure 10*) into holes 20 in one of the side walls 3 and inserting location lugs 21 into holes 22 in that wall. This joint is made secure by a recess 32 in the front wall unit 6 when the unit 6 is fitted as described below.

The fourth step is to fit the back wall unit 4 (*Figure 9*) which has two side flanges 23 and a base flange 24. These are formed with locking catches 25 similar to the catches 16 and they engage rectangular holes 26 near the rear edges of the side walls 3 and base 2 when the flanges 23, 24 are caused to slide into position over these edges. To permit this movement 130 and also further to secure the back wall unit 4, each

flange 23 is formed with a pair of slots 27 arranged for the ends of these slots to slide respectively through slots 28 leading into the end of the adjacent U-shaped channel 11 along the inner edges thereof.

- 5 The fifth step is to fit the outer front wall unit 6 (Figure 12) which is formed with an inner rim comprising a flange 29 spaced slightly to the rear of the main body of the wall unit 6 and arranged to bear against the front edges of the side walls 3 and base
- 10 2. For securing the wall unit 6 down turned tabs 34 on the base 2, slightly inset from the front edge of the base, are inserted in front of the bottom run of the flange 29 and the side walls 3 are forced towards one another to the extent necessary for outwardly
- 15 bent tabs 35 slightly inset from the front edges of the side walls 3, to engage in front of the vertical runs of the flange 29 when the side walls 3 are allowed to return to their vertical positions. The flange 29 is formed on each each side with pairs of slots 30
- 20 which interengage with slots 31 in that channels 11 when the side walls 3 are allowed to return to their vertical positions. The flange 29 is also formed with the recess 32 that overlaps the end of the lock bracket 18 to maintain its location lugs 21 in position.
- 25 The upper edge of the front wall unit 6 is formed with a channel section 33 serving as the drawer handle. The final step is to fit the inner front wall unit 5 (Figure 11) which has locating tongues 36 that are fitted between the tabs 34 and the bottom run of the
- 30 flange 29 on the outer wall unit 6. Moreover, the inner wall unit 5 has lateral flanges 37 that are formed with lips 38 that snap into holes 39 (Figure 6) in the sides 3.

35 CLAIMS

1. A set of units for assembling a drawer manually, substantially without the use of tools and as a permanent structure comprising a flat base and side
- 40 wall unit having a base portion and side wall portions divided from the base portion by lines of weakness in the unit enabling the initially flat unit to be bent along the lines of weakness so that the wall portions are located at required angles to the base
- 45 portion and further units arranged to be permanently secured to base and side wall unit by latching elements forming parts of the said units for locking them to one another.
2. A set of units according to Claim 1 for
- 50 assembling a drawer for a cabinet, in which the said further units comprise runners for extending externally along the longitudinal corners of the bent unit.
3. A set of units according to Claim 2, in which each runner comprises tongues arranged to slide
- 55 between the base portion and bridges beneath the base portion, the said latching elements consisting of locking catches and holes located to receive the catches as the tongues are slid into position, the catches being retroverted tabs that engage the
- 60 edges of the holes to prevent reverse movement of the tongues.
4. A set of units according to any one of the preceding claims, including back and front wall units, at least one of which is arranged to be
- 65 permanently secured to the unit by latching ele-

ments forming parts of the wall unit and said base and side wall unit for locking said base and side wall portions at said required angles to one another.

5. A set of units according to Claim 4, in which the back wall unit has flanges to be slid into position over the base and side wall portions, said latching elements consisting of locking catches and holes located to receive the catches as the flanges are slid into position, the catches being retroverted tabs that
- 70 engage the edges of the holes to prevent reverse movement of the flanges.
6. A set of units according to Claim 4 or Claim 5, for assembling a drawer for a cabinet in which the front wall unit is arranged to be secured against the
- 80 front edges of the base and side wall portions by tabs on the base and front wall unit and in which a an inner front wall unit is a sliding fit between the front wall unit and tabs bent out of the base and side wall unit.
7. A set of units according to any one of the preceding claims, in which the units are made of sheet metal and the lines of weakness are formed by perforating the sheet metal along the said lines.
8. A set of units for assembling a filing cabinet
- 90 drawer substantially as hereinbefore described with reference to the accompanying drawings.
9. A drawer when assembled from a set of units according to any one of the preceding claims.

95 New claims or amendments to claims filed on 30.1.81

Superseded claims

New or amended claims:- (As per attached sheets)

1. A set of essentially rigid units for assembling a
- 100 drawer manually, substantially without the use of tools and as a permanent structure comprising a flat base and side wall unit having a base portion and side wall portions divided from the base portion by longitudinal lines of weakness in the unit enabling the initially flat unit to be bent along the lines of
- 105 weakness so that the wall portions are located at required angles to the base portion and further units arranged to be permanently secured to base and side wall unit by latching elements forming parts of the said units for locking them to one another, one of
- 110 the said further units comprising runners for extending externally along the longitudinal corners of the bent unit.
2. A set of units according to Claim 1, in which each runner comprises tongues arranged to slide between the base portion and bridges beneath the base portion, the said latching elements consisting of locking catches and holes located to receive the catches as the tongues are slid into position, the
- 120 catches being retroverted tabs that engage the edges of the holes to prevent reverse movement of the tongues.
3. A set of units according to any one of the preceding claims, including back and front wall
- 125 units, at least one of which is arranged to be permanently secured to the unit by latching elements forming parts of the wall unit and said base and side wall unit for locking said base and side wall portions at said required angles to one another.
- 130 4. A set of units according to Claim 3, in which

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the back wall unit has flanges to be slid into position over the base and side wall portions, said latching elements consisting of locking catches and holes located to receive the catches as the flanges are slid into position, the catches being retroverted tabs that engage the edges of the holes to prevent reverse movement of the flanges.

5 5. A set of units according to Claim 4 or Claim 5, for assembling a drawer for a cabinet in which the front wall unit is arranged to be secured against the front edges of the base and side wall portions by
10 tabs on the base and front wall unit and in which an inner front wall unit is a sliding fit between the front wall unit and tabs bent out of the base and side wall
15 unit.

6. A set of units according to any one of the preceding claims, in which the units are made of sheet metal and the lines of weakness are formed by perforating the sheet metal along the said lines.

20 7. A set of units for assembling a filing cabinet drawer substantially as hereinbefore described with reference to the accompanying drawings.

8. A drawer when assembled from a set of units according to any one of the preceding claims.

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